LISTING OF CLAIMS

1. (Currently Amended) A method for electronically trapping a first digital color image pixel comprising a plurality of colorant values, the method comprising:

identifying a plurality of pixels that surround the first pixel, each of the surrounding pixels comprising a plurality of colorant values;

comparing a colorant value of each of the surrounding pixels with a corresponding colorant value of the first pixel;

wherein comparing further comprises determining a difference between a sum of magnitudes of differences between colorant values of each of the surrounding pixels and corresponding colorant values of the first pixel, and a magnitude of a sum of differences between colorant values of each of the surrounding pixels and corresponding colorant values of the first pixels;

identifying one of the surrounding pixels to control trapping of the first pixel; and

trapping the first pixel based on a relationship between a colorant value of the first pixel and a corresponding colorant value of the identified controlling pixel.

2. (Previously Presented) The method of claim 1, wherein the plurality of surrounding pixels comprise a trapping window that comprises a circular shape.

3. (Previously Presented) The method of claim 1, wherein the plurality of surrounding pixels comprise a trapping window that comprises an elliptical shape.

4–7. (Cancelled).

8. (Original) The method of claim 1, further comprising adjusting the compared colorant values of each of the surrounding pixels

based on a corresponding distance between the surrounding pixel and the first pixel.

9. (Original) The method of claim 1, wherein the relationship comprises a difference between a colorant value of the identified pixel and a corresponding colorant value of the first pixel.

10. (Previously Presented) The method of claim 1, wherein the colorant values comprise cyan, magenta, yellow and black colorants.

11. (Currently Amended) A method for electronically trapping a first digital color image pixel comprising a plurality of colorant values, the method comprising:

identifying a plurality of pixels that surround the first pixel, each of the surrounding pixels comprising a plurality of colorant values;

evaluating a function of a colorant value of each the surrounding pixels and a corresponding colorant value of the first pixel;

wherein the function determines a difference between a sum of magnitudes of differences between colorant values of each of the surrounding pixels and corresponding colorant values of the first pixel, and a magnitude of a sum of differences between colorant values of each of the surrounding pixels and corresponding colorant values of the first pixel;

identifying one of the surrounding pixels to control trapping of the first pixel; and

trapping the first pixel based on a relationship between a colorant value of the first pixel and a corresponding colorant value of the identified controlling pixel.

12. (Previously Presented) The method of claim 11, wherein the plurality of surrounding pixels comprise a trapping window that comprises a circular shape.

13. (Previously Presented) The method of claim 11, wherein the plurality of surrounding pixels comprise a trapping window that comprises an elliptical shape.

14-17. (Cancelled).

18. (Original) The method of claim 11, further comprising adjusting the compared colorant values of each of the surrounding pixels based on a corresponding distance between the surrounding pixel and the first pixel.

19. (Original) The method of claim 11, wherein the relationship comprises a difference between a colorant value of the identified pixel and a corresponding colorant value of the first pixel.

20. (Original) The method of claim 11, wherein the colorant values comprise cyan, magenta, yellow and black colorants.

21. (Currently Amended) A method for electronically trapping a first digital color image pixel comprising a plurality of colorant values, the method comprising:

identifying a plurality of pixels that surround the first pixel, each of the surrounding pixels comprising a plurality of colorant values;

evaluating a function value associated with each of the surrounding pixels, each function value comprising a difference between the colorant values of the corresponding surrounding pixel and corresponding colorant values of the first pixel;

wherein the function value comprises a difference between a sum of magnitudes of differences between colorant values of each of the surrounding pixels and corresponding colorant values of the first pixel, and a magnitude of a sum of differences between colorant values of each of the surrounding pixels and corresponding colorant values of the first pixel;

adjusting each of the function values based on a distance between the corresponding surrounding pixel and the first pixel;

identifying a maximum adjusted function value; and

trapping the first pixel based on a relationship between a colorant value of the first pixel and a corresponding colorant value of the surrounding pixel associated with the maximum adjusted function value.

22. (Currently Amended) The method of claim 21, wherein the plurality of surrounding pixels comprise a trapping window that comprises a circular shape.

23. (Previously Amended) The method of claim 21, wherein the plurality of surrounding pixels comprise a trapping window that comprises an elliptical shape.

24-27. (Cancelled)

28. (Original) The method of claim 21, wherein the relationship comprises a difference between a colorant value of the first pixel and a corresponding colorant value of the surrounding pixel associated with the maximum adjusted function value.

29. (Original) The method of claim 21, wherein the colorant values comprise cyan, magenta, yellow and black colorants.

30. (Currently Amended) Apparatus for electronically trapping a first digital color image pixel comprising a plurality of colorant values, the apparatus comprising:

means for identifying a plurality of pixels that surround the first pixel, each of the surrounding pixels comprising a plurality of colorant values;

means for comparing a colorant value of each of the surrounding pixels with a corresponding colorant value of the first pixel;

wherein the comparing means further comprises means for determining a difference between a sum of magnitudes of differences between colorant values of each of the surrounding pixels and corresponding colorant values of the first pixel, and a magnitude of a sum of differences between colorant values of each of the surrounding pixels and corresponding colorant values of the first pixel;

means for identifying one of the surrounding pixels to control trapping of the first pixel; and

means for trapping the first pixel based on a relationship between a colorant value of the first pixel and a corresponding colorant value of the identified controlling pixel.

31. (Previously Amended) The apparatus of claim 30, wherein the plurality of surrounding pixels comprise a trapping window that comprises a circular shape.

32. (Previously Amended) The apparatus of claim 30, wherein the plurality of surrounding pixels comprise a trapping window that comprises an elliptical shape.

33-36. (Cancelled)

37. (Original) The apparatus of claim 30, further comprising means for adjusting the compared colorant values of each of the surrounding pixels based on a corresponding distance between the surrounding pixel and the first pixel.

38. (Original) The apparatus of claim 30, wherein the relationship comprises a difference between a colorant value of the identified pixel and a corresponding colorant value of the first pixel.

39. (Original) The apparatus of claim 30, wherein the colorant values comprise cyan, magenta, yellow and black colorants.

40. (Currently Amended) ~~Apparatus~~ An apparatus for electronically trapping a first digital color image pixel comprising a plurality of colorant values, the apparatus comprising:

means for identifying a plurality of pixels that surround the first pixel, each of the surrounding pixels comprising a plurality of colorant values;

means for evaluating a function of a colorant value of each the surrounding pixels and a corresponding colorant value of the first pixel;

<u>wherein the means for evaluating determines a difference between a sum of magnitudes of differences between colorant values of each of the surrounding pixels and corresponding colorant values of the first pixel, and a magnitude of a sum of differences between colorant values of each of the surrounding pixels and corresponding colorant values of the first pixel;</u>

means for identifying one of the surrounding pixels to control trapping of the first pixel; and

means for trapping the first pixel based on a relationship between a colorant value of the first pixel and a corresponding colorant value of the identified controlling pixel.

41. (Previously Amended) The apparatus of claim 40, wherein the plurality of surrounding pixels comprise a trapping window that comprises a circular shape.

42. (Previously Amended) The apparatus of claim 40, wherein the plurality of surrounding pixels comprise a trapping window that comprises an elliptical shape.

43-46. (Cancelled)

47. (Original) The apparatus of claim 40, further comprising means for adjusting the compared colorant values of each of the surrounding pixels based on a corresponding distance between the surrounding pixel and the first pixel.

48. (Original) The apparatus of claim 40, wherein the relationship comprises a difference between a colorant value of the identified pixel and a corresponding colorant value of the first pixel.

49. (Original) The apparatus of claim 40, wherein the colorant values comprise cyan, magenta, yellow and black colorants.

50. (Currently Amended) ~~Apparatus~~ An apparatus for electronically trapping a first digital color image pixel comprising a plurality of colorant values, the apparatus comprising:
    means for identifying a plurality of pixels that surround the first pixel, each of the surrounding pixels comprising a plurality of colorant values;
    means for evaluating a function value associated with each of the surrounding pixels, each function value comprising a difference between the colorant values of the corresponding surrounding pixel and corresponding colorant values of the first pixel;
    wherein the means for evaluating determines a difference between a sum of magnitudes of differences between colorant values of each of the surrounding pixels and corresponding colorant values of the first pixel, and a sum of magnitudes of differences between colorant values of each of the surrounding pixels and corresponding colorant values of the first pixel;
    means for adjusting each of the function values based on a distance between the corresponding surrounding pixel and the first pixel;

means for identifying a maximum adjusted function value; and

means for trapping the first pixel based on a relationship between a colorant value of the first pixel and a corresponding colorant value of the surrounding pixel associated with the maximum adjusted function value.

51. (Previously Amended) The apparatus of claim 50, wherein the plurality of surrounding pixels comprise a trapping window that comprises a circular shape.

52. (Previously Amended) The apparatus of claim 50, wherein the plurality of surrounding pixels comprise a trapping window that comprises an elliptical shape.

53-56. (Cancelled)

57. (Original) The apparatus of claim 50, wherein the relationship comprises a difference between a colorant value of the first pixel and a corresponding colorant value of the surrounding pixel associated with the maximum adjusted function value.

58. (Original) The apparatus of claim 50, wherein the colorant values comprise cyan, magenta, yellow and black colorants.

59. (Currently Amended) ~~Apparatus~~ An apparatus for electronically trapping a first digital color image pixel comprising a plurality of colorant values, the apparatus comprising:

a memory adapted to store a plurality of pixels that surround the first pixel, each of the surrounding pixels comprising a plurality of colorant values;

a first logic element adapted to determine differences between the colorant values of each of the surrounding pixels from the corresponding colorant values of the first pixel;

a ~~second~~ first logic element adapted to sum magnitudes of the differences associated with each of the surrounding pixels and subtract therefrom a magnitude of a sum of the differences associated with each of the surrounding pixels;

a ~~third~~ second logic element adapted to determine the surrounding pixel associated with the ~~maximum~~ sum from the ~~second~~ first logic element; and

a ~~fourth~~ third logic element adapted to trap the first pixel based on a relationship between a colorant value of the first pixel and a corresponding colorant value of the surrounding pixel determined by the ~~third~~ second logic element.

60. (Currently Amended) The apparatus of claim 59, wherein the first, second, and third ~~and fourth~~ logic elements comprise pipelined logic elements.

61-64. (Cancelled).